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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,933	04/11/2001	Lifeng Wu	M-10096 US	5253

7590 11/18/2004  
SKJERVEN MORRILL LLP  
800 POWELL ST  
SAN FRANCISCO, CA 94108-2006

EXAMINER

HOGAN, MARY C

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Applicati n No.</b> 09/832,933	<b>Applicant(s)</b> WU ET AL.	
	<b>Examiner</b> Mary C Hogan	<b>Art Unit</b> 2123	

**-- The MAILING DATE f this communication appears on the cover sheet with the corresp ndence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 April 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disp sition of Claims**

- 4) ☒ Claim(s) 1-92 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-92 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. **Claim 1 and all dependent claims**, drawn to determining a component degradation parameter, obtained by simulating, at the supplied circuit stress time value, classified in class 703, subclass 22.
  - II. **Claims 8 and 21 and all dependent claims of Claims 8 and 21**, drawn to determining a component degradation parameter supplying an independent performance criterion for distinct sets of components, and using this criteria to determine the relative degradation parameter, classified in class 703, subclass 22.
  - III. **Claims 40,46 and 50 and all dependent claims of 40,46 and 50**, drawn to determining the component degradation parameter from a device degradation table, classified in class 703, subclass 22.
  - IV. **Claim 51 and all dependent claims**, drawn to revising the netlist, a distinct mechanism degradation parameter derived from the component degradation parameter, and determining the degraded operation of the circuit using the revised netlist, classified in class 703, subclass 14.
  - V. **Claim 59 and all dependent claims**, is directed to drawn to revising the netlist, a distinct mechanism degradation parameter derived from the component degradation parameter, determining the degraded operation of the circuit using the revised netlist, and incorporating the aging of the selected components by updating the models of the circuit simulator, classified in class 703, subclass 13.
  - VI. **Claim 60 and all dependent claims**, are directed to incorporating the aging of the selected components by updating the models of the circuit simulator, classified in class 703, subclass 14.
  - VII. **Claim 66 and all dependent claims**, are directed to providing model cards containing a device degradation parameter, classified in class 703, subclass 14.
  - VIII. **Claim 75 and all dependent claims**, are directed to quantizing each of said relative degradation levels to one of a plurality of discrete values and using this respective quantized relative degradation level to determine degraded operation of the circuit classified in class 703, subclass 23.

- IX. **Claim 78 and all dependent claims**, are directed to determining the degradation parameter wherein determining is embedded in said circuit simulator and is model independent, classified in class 703, subclass 14.
- X. **Claims 82 and all dependent claims**, are directed to a circuit degradation simulator, a user defined circuit simulator and an interface for connecting the user defined circuit simulator to the circuit degradation simulator, classified in class 703, subclass 14.

2. Inventions I and II-X are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the actual degradation of a circuit would not depend on the method of determining the degradation of the circuit. The subcombination has separate utility such as shown in the following table:

Group	Separate Utility
I	predicted value for degradation based on simulated component models
II	simplification of determining parameter by use of predetermined data
III	degradation table enables a quick look-up of the degradation parameter
IV	enables the designer to make changes to the design
V	allows the designer to make changes to the design and incorporate other design parameters in the process
VI	allows the designer to incorporate other design parameters in the process
VII	allows a predetermined model and degradation parameter to be used
VIII	allows the building of device models and current sources
IX	allows the determination of the parameter independent of the model, therefore, extracting a different value then if determined dependent of the model
X	portability among the circuit degradation simulation used

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

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4. A telephone call was made to Michael Cleveland on 11/10/04 to request an oral election to the above restriction requirement, but did not result in an election being made.
5. Applicant is advised that a reply to this requirement must include an election of the invention to be examined, even though the requirement may be traversed under 37 CFR 1.143.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary C Hogan whose telephone number is 571-272-3712. The examiner can normally be reached on 7:30AM-5PM Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on 571-272-3716. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mary C Hogan

Examiner

Art Unit 2123



KEVIN J. TESKA  
SUPERVISORY  
PATENT EXAMINER